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APPLICATION NO. 997	FILING DATE 12/22/98	FUKAMI	ATTORNEY DOCKET NO.
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T 8565D-7213

LOEB & LOEB
SUITE 2200
10100 SANTA MONICA BLVD
LOS ANGELES CA 90067-4164

IM22/1005

EXAMINER

SOUBRA, I

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 10/05/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/218,997	FUKAMI, TERUAKI	
	Examiner	Art Unit	
	Imad Soubra	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
 2. ☐ received in Application No. (Series Code / Serial Number) _____
 3. ☒ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3 & 5</u> . | 20) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Objections

1. Claims 1 and 2 are objected to because of the following informalities: Applicant needs to begin each claim with "A" an indefinite article. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as rendering the claims as indefinite since there are no method and manipulative steps recited within the claims.

3. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. When using the phrase "storage water", what does the applicant attempting to claim? Is the applicant attempting to claim a "container"? Please specify to clarify the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7, 12-13, 16-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kern. Kern inherently discloses the same method for storing silicon wafers in water with the concentration of copper being 0.01 ppb or less (see Table 4; pages 78 and 79) which is also known as ultra pure water. EDTA is used as chelating agent to treat and preserve the silicon wafer in the ultra pure water solution (see Figure 1; pages 30 and 31). Polishing silicon wafers are also discussed in order to remove the impurities from the silicon wafers (pages 488-489). The characteristics of hydrophobic wafers are addressed (pages 100-101; pages 128-129) as well as the surfactant being added to water (page 402).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- Determining the scope and contents of the prior art.
- Ascertaining the differences between the prior art and the claims at issue.
- Resolving the level of ordinary skill in the pertinent art.
- Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 14-15 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kern in view of Hayashida et al. Kern fails to disclose that the chemical solution to which the chelating agent employed is in the form of an alkaline solution. The patent from Hayashida teaches that the chelating agent is added as an alkaline solutions throughout Hayashida et al. patent, and the performance of the chelating agent comparing the agent to the NTA as a treatment agent is discussed in column 4, line 64 – column 5, line 11. So the combination of these references will result in the same method. Kern as taught by Hayashida et al. the ultra pure water is consisted of the same composition and properties in storing the silicon wafer. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to substitute the chemical solution of Hayashida et al. for the solution of Kern in order to effectively preserve silicon wafers.


5. Claims 8-11 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kern in view of Prigge et al. Kern fails to disclose when the wafer may be stored immediately after polishing in order to preserve the silicon wafers. The patent of Prigge et al. teaches that silicon wafers are stored in an aqueous solution such as water immediately after polishing the silicon wafers (see abstract; column 3, lines 1-17). Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to substitute the procedure for storing the wafers into an aqueous solution such as water immediately after polishing process of Prigge et al. for the preservation of silicon wafers of Kern in order to effectively preserve the silicon wafers throughout the process.

Conclusion

6. Any inquiry concerning this communication from the examiner should be directed to Imad Soubra whose telephone number is (703) 305-3541. The examiner can normally be reached on 8:30 am to 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on (703) 308-2920. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-5408 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1193.

Imad Soubra

October 4, 2000


Terrence R. Till
Primary Examiner